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ABSTRACT

The field of Environmental Health Technology (EHT) encompasses both the equipment and the trained expertise required to utilize land, water, energy, and minerals in the service of human health and welfare. EHT technicians work in disease control, licensing bureaus, hospitals, nursing homes, hazardous waste agencies, and other health agencies. In Arizona, EHT personnel must be licensed and registered. In response to the state's need for trained personnel in the field, a study was conducted to identify the general competencies and knowledge, and the broad and specific skills that should be included in an associate degree EHT curriculum. EHT personnel at various state and county departments were asked to assess the importance of 18 curricular subjects to their work. An analysis of 10 randomly selected questionnaires from each of five responding agencies suggested that the EHT curriculum should cover, in order of importance: (1) public health laws; (2) sampling techniques; (3) survey and test kits; (4) health problems and priorities; (5) microbiology; (6) epidemiology; (7) program planning and implementation; (8) biology; (9) legal factors; (10) supervisory techniques; (11) systems approaches; (12) group dynamics; (13) public information planning; (14) testing and training aids; (15) inorganic and organic chemistry; (16) survey methods; (17) mathematics and introductory statistics; and (18) audio-visual aids. The survey instrument is appended. (EJV)

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DEVELOPMENT OF A TWO YEAR ASSOCIATE ARTS DEGREE IN ENVIRONMENTAL HEALTH TECHNOLOGY

by

Charles R. Campbell

Arizona State University

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PRACTICUM PROPOSAL CHECK SHEET

1. Name of Participant: Charles R. Campbell

   Cluster: Phoenix Date: December, 1985

2. Job Title: Coordinator Environmental Health, ASU - Evening Faculty - Phoenix College

3. Title of the Practicum: Development of Two Year Associate Arts Degree in Environmental Health Technology

4. What change in the institution or organization is proposed? A new curriculum in Environmental Health Technology for the Maricopa Community College District

5. Where will the practicum be carried out?

   Institution: State of Arizona/MCCD

   Department: N/A

6. Does the design contain criteria for measuring the results of the Practicum? Yes

7. What are the required inputs?

   A. Estimated number of hours to complete the Practicum, and by whom? 60-80 hours

   B. Are needed facilities and other means available? Yes

      1. If the performance of the practicum requires prior approval from a superior, has such approval been secured? N/A

   C. When (date) will the practicum be started and when (date) is it expected to end? Oct. 1984 - Dec. 1985

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Chapter 1

INTRODUCTION

This study undertook research salient to the development of a two-year junior college curriculum leading to the Associate Arts Degree in Environmental Health Technology. The developed curriculum and thus the attendant research were specifically aimed at satisfying the needs of environmental health technology in the State of Arizona.

Background and Significance

One of the greatest health concerns of society today is human survival in the face of ecological deterioration. Overpopulation, air pollution, and depletion of the world's resources are major problems affecting public health. Perhaps the best example of the complexity of the threat to public health engendered by ecological deterioration can be seen in the health concerns and problems attendant to over- population. As noted by Light and Keller (1982), the consequences of overpopulation include elevated rates of malnutrition and starvation; increased susceptibility to disease or death due to climatic influences destroying or partially destroying crops; decreased living standards; elevated unemployment

rates and the decreased ability of government to supply adequate education and health care.

With respect to remediating problems of ecological deterioration, Williamson, Swingle, and Sargent (1982) have noted that there has been little concerted effort, at either the national or international level, to take significant measures. Several reasons have been suggested for why ecological concerns have met with such a lethargic response. One explanation is that big business and industry have used their political clout in an effort to block remedial efforts which they view as inhibiting to their goals of production, profits, or jobs (Smelser, 1981). Another explanation is that politicians, cognizant of the controversial nature of many ecological issues, are slow to take any action which would or could be interpreted as aligning them with one side of the controversy (Smelser, 1981).

However, the explanation for the lethargic response to correcting ecological situations threatening to public health that is most salient to this study is the explanation offered by Williamson, Swingle, and Sargent (1982). These authors note that concerted effort to remediate ecological deterioration is often not forthcoming due to general ignorance about the ecology in general as well as problem specifics. At least one study is supportive of this claim. Investigating three samples: (1) conservationist adults; (2) college students; and (3)

non-college educated adults, Maloney and Ward (1973) found that there was a strong emotional involvement connected with several ecological concerns; but there was also considerable ignorance. The conservationists had the most complete knowledge and the general adults the least --- but despite these significant differences, overall knowledge was far from comprehensive.

If general ignorance underlies the difficulty in finding effective solutions, it would be more effective to provide college training in the area of ecological health technology. The development of a two-year junior college curriculum leading to the Associate Arts Degree in Environmental Health Technology is one answer to that need for training.

This study finds significance not only in that it assists in the need to remedy ignorance in the general field of environmental health technology but also in that it particularly assists with the problem in Arizona. Arizona was specifically singled out as the target state because statistics show that the need for trained personnel in the area is great. Specifically, Arizona currently has over 100 positions for trained personnel in Environmental Health Technology, e.g., positions in the Division of Disease Control, the Bureau of Licensing, hospitals, and nursing homes, the Bureau of Hazardous Waste, etc. However, Senate Bill 1136, passed by the Arizona State Legislature in 1975, mandates that these personnel be

licensed and registered; and, according to public health officials from both county and state departments, the pass rate on the examinations required for licensing is very low. Moreover, there have been allegations that even those passing their licensing exams are not adequately prepared to effectively fulfill their job positions. Certainly, a strong curriculum leading to the Associate of Arts Degree in Environmental Health Technology would operate to better the qualifications of people in this state for entering the field.

Research Questions

Research efforts were aimed at determining the answers to the following questions:

1. What general competencies and knowledge should be included in the curriculum offered to potential candidates for the A.A. in Environmental Health Technology?

2. What broad and specific skill requirements should be offered to potential candidates for the A.A. Degree in Environmental Health Technology?

Definition of Terms

So that the study may be fully understood, the term Environmental Health Technology refers to both the equipment and the trained expertise required to assist in the effort to utilize resources such as land, water, energy, and minerals in the service of human health and welfare.

Limitations

The boundaries of the undertaken study may be listed as follows:

1. The study is restricted to an examination of opinion data only.

2. The study is restricted to a sample of individuals currently working in the environmental health field in a single geographic area; this area is the State of Arizona.

3. The study examines opinions as to what should be included in the development of curriculum for only five areas of environmental health technology. These areas are: (1) General Science; (2) Communication; (3) Planning and Management; (4) General Technical Skills; and (5) Administration and Supervising.

4. The study's analysis is limited primarily to descriptive statistics and, therefore, interpretations and conclusions formulated on the basis of analyzed data are limited to those types of statements allowable when using non-inferential methods of analysis.

Assumptions

The assumptions of the study may be delineated as follows:

1. It is assumed that opinion data is related to the actual needs of an environmental health technology

curriculum; that is, it is assumed that opinion data consists of accurate assessments.

2. It is assumed that sample subjects are not atypical of the population from which they were drawn.

3. It is assumed that the survey instrument used to collect data is reliable and valid.

Chapter 2

REVIEW OF RELATED LITERATURE

The purpose of the review of literature presented here is to provide context to the study by examining the existing research and literature related to the field of environmental health technology. In this regard, the review examines the literature related to basic areas of ecology and human survival. There are: (1) the literature and research related to world resources; and (2) the literature and research related to environmental damage.

World Resources

In general, ecological resources may be broadly divided into three areas: (1) land; (2) water; and (3) energy and minerals. With respect to the resource of land, Scrimshaw and Taylor (1980) estimate that the total world area on which crops may be grown is approximately 10 billion acres. The authors also note that since there is, in any given year, less than half of this land being used for crops, there is room for expansion. Indeed they estimate that, all in all, new land could be cultivated so as to feed up to 10 billion people; and this at standards far higher than those of today.

Another important resource is water which is, of

course, vital to agricultural endeavors. According to George (1976), if this resource were more effectively used (i.e., removing pollutants, properly irrigating, etc.), this resource alone could be utilized to solve the food problem for many years.

The third category of resources is energy and minerals. The demands for these resources are constantly increasing both as a function of population growth and economic development. For example, Hartley (1965) has observed that in this century, the use of iron ore has doubled every 11 years. It should be noted here that while certain sources of energy such as iron ore and oil are nonrenewable, there are alternative methods and these sources of energy, i.e., solar energy, wind energy, etc., often exist in abundance.

Having examined world resources, the question now becomes: How are these resources currently being used? According to Smelser (1980), the picture is rather glum, especially in terms of our utilization of the resource of energy. In general, Smelser claims that world resources are being exhausted through pollution, improper methods of usage and failure to supplement depleting sources with more plentiful sources. Another way in which world resources are ineffectively utilized is through diminishment of existing resources through damage caused to the environment. The next section of this review examines this area of research and literature.

Environmental Damage

Historically, the drive of economic and technical development has been associated with ecological harm. Examining American history alone, Dasmann (1979) delineated a series of ecological catastrophies wrought on U.S. resources. For example, the advent of hydraulic mining in 1853 resulted in the washing away of hills and mountains. Pollutants have destroyed marine life, and the search for gold resulted in harmful diversions of streams and river beds.

Unfortunately, environmental damage remains a problem even today. One world resource often associated with such damage is energy. Oil spills have ruined beaches and killed marine life. Power plants that burn coal and gas pollute. In addition, nuclear power is associated with dangerous elevations of water temperatures in surrounding bodies of water and, of course, with the threat of a crisis involving leakage of radiation. It should be noted that the problem of radiation is not restricted to concerns over nuclear energy. The environment is filled with sources of radioactivity from such things as X-rays from television, medical equipment, and spent nuclear fuel.

Research indicates that water quality has also been damaged due to industrial wastes and accidents (Gold, 1979). Further, Wagner (1971) informed that the release of heavy metals like lead and copper into our water, have

interfered with the enzyme action essential to both plant and marine life. Moreover, sulfur emissions from mineshafts and smokestacks are associated with acid rains.

Summary

As can be seen from the foregoing review of related literature and research, the world in general and America in particular stands in need of expertise in environmental health technology to correct the problems associated with exhaustion of natural resources and environmental damage. It is only by turning out increasing numbers of trained and qualified personnel in this field that the world will be able to effectively utilize its resources and make the environment serve the health and welfare of the human race.

Chapter 3

PROCEDURES AND METHODOLOGY

Subjects

Fifty workers in environmental health technology for the state of Arizona served as subjects in the study. Subjects were recruited by contacting various state and county departments employing environmental health personnel. Contact was made by calling department directors and requesting permission to conduct the study. When permission was granted, the investigator mailed the survey instrumentation to the directors who then dispensed them to the appropriate personnel. Directors instructed personnel to complete forms and return them; directors then mailed the completed forms back to the investigator in self-addressed and stamped envelopes provided.

Once all completed survey forms were returned, the investigator randomly selected 10 completed forms from each agency contacted.

Instrumentation

The survey forms which environmental health personnel completed were designed by the investigator. Forms consisted of the following brief explanation of the study:

> This study is concerned with developing a two-year curriculum leading to the A.A. in environmental health technology. We would appreciate the input of people currently working in the field. Please answer all of the questions below to the best of your ability.

The above explanation was followed by a complete delineation of the course outline. Under each item in the curriculum, was placed a Likert-type scale on which respondents were to rate how important they believed the item was to their every day work in the field. Ratings were made on a six-point weight scale: Extremely Important; Very Important; Moderately Important; Moderately Unimportant; Very Unimportant; Extremely Unimportant with scale weights assigned in such a manner that importance increased as scale value increased.

Procedures

Data collection first involved library research as to information regarding what environmental health personnel are expected to know in order to effectively do their research. On the basis of this information, an outline of the curriculum was developed and then turned into the instrumentation form previously described. These forms were then disseminated to people working in the environmental health field in the State of Arizona. From each of the agencies returning personnel's completed forms, ten forms were randomly selected for a total of 50.

Data Analysis

Sample ratings were tabulated into mean ratings by computing ratings made of each item and dividing by the number of subjects providing ratings. For any item whose mean rating fell below 3.5 (a rating directly between Moderately Important and Moderately Unimportant), the item was considered insufficiently important for inclusion in the curriculum. For those items whose means were computed as being above 3.5, it was decided that they were sufficiently important as to be included in the curriculum. It was in this way that ratings were used to decide what areas should be included in the development of a curriculum for the Associate of Arts Degree in Environmental Health Technology for the State of Arizona.

Chapter 4

PRESENTATION OF RESULTS

Collected data consisted of Arizona State environmental health field workers' opinions on eighteen facets of curriculum. The findings observed for each of these facets are discussed below.

Audio Visual Aids

Workers were required to rate the importance of having a good understanding of how to use audio-visual aids in their every day work in the field. The ratings, although into the range acceptable for inclusion in the curriculum, evidenced an overall mean of 3.88 with a standard deviation of .79. This was the lowest mean observed in the study.

College Math and Introductory Statistics

The second lowest mean observed in the study related the importance ratings made by subjects regarding the curriculum facet of college math and introductory statistics. The range of ratings varied from a low of 2 to a high of 6, with the mean computed at 4.12 and the standard deviation of 1.29. It should be noted that this item was associated with the largest variation in ratings.

Survey Methods in the Areas of Program Planning and Implementation

The importance workers attached to understanding survey methods in the areas of program planning and implementation was computed at a value between Moderately Important and Very Important with the average lying closer to Moderately Important. This value was 4.18. The observed standard deviation was .90. Ratings varied from a low of 3 (Moderately Unimportant) to a high of 6 (Extremely Important).

General College Inorganic and Organic Chemistry

The averaged importance rating attached to knowing general college inorganic and organic chemistry by workers in the environmental health field was 4.22, a value slightly above Moderately Important. Ratings varied from 1 (Extremely Unimportant) to 6 (Extremely Important), and as might be expected from this, the standard deviation was somewhat large, attaining a value of .91.

Testing and Training Aids

Workers were also asked to indicate the importance they attached to a knowledge of testing and training aids in terms of its relation to their every day work. Ratings varied from a low of 2 (Very Unimportant) to a high of 6 (Extremely Important). The average rating was computed at

4.24, a value slightly above Moderately Important. The standard deviation was .98.

Public Information Planning

For the importance of public information planning, ratings were observed to range from a value of 2 (Very Unimportant) to a value of 6 (Extremely Important). The mean was observed to be 4.26 with a standard deviation of .58.

Group Dynamics, Techniques, and Processes

When asked to indicate how important to their every day work, workers thought a knowledge of group dynamics, techniques, and processes, it was observed that there was a good deal of variance with a standard deviation of 1.05. The averaged rating was 4.28, however, which is, once again, a value slightly above Moderately Important.

Systems Approach

Workers were also asked to rate how important they believed it to be to have a good understanding of the systems approach to the analysis of health programs and problems. With respect to these ratings, the average was observed to be 4.34 with a standard deviation of .79.

Supervisory Techniques

Workers were asked how important they thought it

was to their everyday work to have a good understanding of supervisory techniques as they are used in environmental health programs. Once again, variation was fairly large and calculated to a value of .93. The observed mean was 4.60 or a value between Moderately and Very Important.

Legalities

When asked how important they felt it was to their everyday work to have a good understanding of the legalities involved in program planning and implementation, workers evidenced a mean rating of 4.74, a value moderately close to the Very Important range of the scale. The standard deviation observed with respect to this item was 1.12; this is the second largest standard deviation observed for the sample.

College Biology

Sample subjects evidenced rather high ratings for the importance to be attached to knowing college biology. The mean observed for this item was 4.82, a value quite close to the Very Important end of the scale. The standard deviation was fairly small, a value of .52.

Planning and Implementing Programs

The importance attached to having a good understanding of techniques in the planning and implementation of environmental health programs was also rated high by

workers. The average rating was 4.92, however, the standard deviation was rather hefty, a value of 1.01.

College Epidemiology

The importance workers attached to a knowledge of college epidemiology was also very high, the average reading being 4.98. The standard deviation was .84.

College Microbiology

The average rating attached to the importance of knowing college microbiology was precisely 5.0 or precisely at the scale value of Very Important. This item also had the lowest standard deviation observed, a mere .38.

Health Problems and Priorities

Workers were also asked to indicate the degree of importance they attached to having a good general understanding of overall health problems and health priorities. The average rating here was observed to be above the Very Important end of the scale at a value of 5.18. The standard deviation was .80.

Ability to Use Survey and Test Kits

The importance workers attached to the ability to use survey and test kits was the third highest in the study. Here the average rating was 5.22. The standard deviation was again .80.

Sampling Techniques

The second highest importance rating of the study was the degree of importance workers attached to their need for the knowledge of a variety of sampling techniques related to air, water, food, toxic chemicals, etc. The mean rating observed for this facet of curriculum was 5.26 with a standard deviation that was fairly small, a value of .44.

Public Health Laws

The greatest degree of importance was attached by workers to the curriculum facet regarding the need to know public health laws. The average rating observed here was mid-way between Very Important and Extremely Important; the value was 5.56. The standard deviation was .50.

Summary

So that findings may be fully understood, they are presented in terms of all observed means and standard deviation in Table 1.

Table 1

Means and Standard Deviations Observed for Curriculum Facets

Curriculum	Mean	S.D.
Audio-Visual Aids	3.88	.79
Math/Introductory Statistics	4.12	1.29
Survey Methods in Program Planning and Implementation	4.18	.90
Inorganic/Organic Chemistry	4.22	.91
Testing and Training Aids	4.24	.98
Public Information Planning	4.26	.58
Group Dynamics	4.28	1.05
Systems Approach	4.34	.79
Supervisory Techniques	4.60	.93
Legalities	4.74	1.12
Biology	4.82	.52
Planning/Implementing Programs	4.92	1.01
Epidemiology	4.98	.84
Microbiology	5.00	.38
Health Problems and Priorities	5.18	.80
Survey and Test Kits	5.22	.80
Sampling Techniques	5.26	.44
Public Health Laws	5.56	.50

Chapter 5

INTERPRETATION, CONCLUSIONS, AND RECOMMENDATIONS

Interpretation of Results

Overall, the observed findings indicate that every item selected should be included in a curriculum developed for obtaining the Associate of Arts Degree in Environmental Health Technology for the State of Arizona. However, findings also suggest that the amount of coverage the investigated areas receive should vary. For example, while such things as the use of audio-visual aids should be taught, the low degree of importance attached to this curriculum facet suggests that it should perhaps only be lightly covered. On the other hand, the importance levels attached to such curriculum facets as the public health laws make it seem reasonable to cover this area at some length.

Interestingly, subjects attached only moderate levels of importance to a knowledge of college math and statistics, inorganic and organic chemistry and to the administrative skills of public information planning. While it seems reasonable to think that since not all workers can be administrators, only moderate importance would be attached to the administrative skill, it is unclear as to why this same degree of importance would be

attached to skills everyone in the field would probably use, namely skills in math, statistics, and chemistry. However, it could be that the relatively low means observed here are due to the fact that these particular curriculum items were associated with extreme response variation. Perhaps, the extremes made the means a bit unreflective of the true average degree of importance attached to these areas.

Conclusions

On the basis of findings, it must be concluded that the developed curriculum should include all of the knowledge and competencies examined in this study. Moreover, findings also suggest that inclusion should be in a somewhat hierarchical manner. Specifically, only moderate attention should be given to some items. These items would be such things as: the use of audio-visual aids, college math and statistics, survey methods in program planning and implementation, inorganic and organic chemistry, the use of testing and training aids, public information planning, and group dynamics.

More than moderate attention would be given to other facets of the curriculum---but still not the most attention. The curriculum would be: a knowledge of the systems approach, supervisory techniques in program planning and implementation, legalities related to the environmental health field, and college biology.

The highest degree of attention would be payed to the following curriculum areas: matters related to planning and implementing programs, college epidemiology, college microbiology, issues of health problems and priorities, the use of survey and test kits, sampling techniques in the field, and public health laws.

Recommendations

The purpose of this study was to compile a preliminary examination of areas that might be included in the development of a two-year, junior college curriculum leading to the Associate Arts Degree in Environmental Health Technology. Findings of the study showed that it would be wise to include in the developed curriculum each of the eighteen areas examined in the study. However, each of these areas should be covered to differing extents.

On the basis of this study's findings, it is recommended that additional research should be undertaken toward the development of the curriculum. Specifically, this additional research should take the form of an examination of what particular information, facts, events, etc. to include with respect to each curriculum area. This information could be obtained through both library research and through the gathering of more expert opinion data as to whether the selected information is truly the best information to include.

Once the curriculum is developed, it is recommended

that evaluative research be conducted. Such research could take the form of assessing the performance of those students exposed to the developed curriculum. For example, research could be conducted to compare the rates at which such students pass the licensing exams; comparisons could be made with those not exposed to the curriculum. Also, an examination could be made of how well these students perform once they have made careers for themselves in the environmental health field. It is only by final evaluations such as those suggested here that it can be determined as to the full effectiveness of the developed curriculum.

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APPENDIX

This study is concerned with developing a two-year curriculum leading to the Associate Arts Degree in Environmental Health Technology. We would appreciate the input of people currently working in the field. Please answer all of the questions below to the best of your ability.

1. How important to everyday work in the field is it to have a good understanding of General College Biology?

   (Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

2. How important to everyday work in the field is it to have a good understanding of General College Inorganic and Organic Chemistry?

   (Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

3. How important to everyday work in the field is it to have a good understanding of College Math and Introductory Statistics?

   (Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

4. How important to everyday work in the field is it to have a good understanding of College General Microbiology?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

5. How important to everyday work in the field is it to have a good understanding of College Epidemiology?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

6. How important to everyday work in the field is it to have a good understanding of Group Dynamics, Techniques and Processes?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

7. How important to everyday work in the field is it to have a good understanding of how to use audio-visual aids?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

8. How important to everyday work in the field is it to have a good understanding of public information planning?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

9. How important to everyday work in the field is it to have a good understanding of the techniques needed to plan and implement environmental health programs?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

10. How important to everyday work in the field is it to have a good understanding of survey methods as used in the area of program planning and implementation?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

11. How important to everyday work in the field is it to have a good understanding of the legalities involved in program planning and implementation?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

12. How important to everyday work in the field is it to have a good understanding and knowledge of testing and training aids?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

13. How important to everyday work in the field is it to have a knowledge of a variety of sampling techniques related to air, water, food toxic chemicals, etc.?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

14. How important to everyday work in the field is it to have a knowledge of and/or the ability to use survey and test kits?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

15. How important to everyday work in the field is it to have a good understanding of public health laws?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

16. How important to everyday work in the field is it to have a good understanding of supervisory techniques used in environmental health programs?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

17. How important to everyday work in the field is it to have a good understanding of systems approach to the analysis of health programs and problems?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

18. How important to everyday work in the field is it to have a good understanding of overall health problems and health priorities?

(Check One Answer Only)

_____ Extremely Important

_____ Very Important

_____ Moderately Important

_____ Moderately Unimportant

_____ Very Unimportant

_____ Extremely Unimportant

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